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RADIO BEACON

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The object of my invention is to provide a radio beacon of simple, durable, and inexpensive construction.

Still a further object of my invention is to provide a radio beacon which is especially adapted for use in connection with the piloting of airplanes or other aircraft.

Still a further object of my invention is to provide a radio beacon which will send out a signal in a predetermined direction so that a pilot may fly on that signal and may be kept upon his course by following the signal.

Still a further object of my invention is to provide means for sending a guiding signal for an aircraft pilot in as narrow a path as possible in order to keep the pilot upon his course.

Still a further object of my invention is to provide a radio beacon with a sending set which will send out a certain signal of maximum intensity in one direction and another signal of maximum intensity in another direction which however is spaced but a short distance from the plane of maximum intensity of the other signal, whereby the pilot may know that he is on his course when he can hear both signals distinctly and may know that he is off his course when he can hear one signal more distinctly than the other.

Still a further object of my invention is to send out a Morse code "N" signal on a directed beam and to send out a Morse code "A" signal on another directed beam at a slight angle to the first beam whereby a pilot traveling on a line between the directed beams receives a Morse code "T" signal whereas he will receive an "A" or an "N" signal after he gets off a line between the two directed beams.

Still a further object of my invention is to provide a radio beacon which will indicate to the pilot of an aircraft the direction toward or from the radio beacon, and which will also indicate to the pilot when he has actually reached a position directly above the station, so that he will not fly by the station when visibility is low, and which may be combined with other means for indicating distances from the airport.

Still a further object of my invention is to provide a radio beacon having sending loops disposed at right angles to each other and which are provided with means for balancing the loops with each other and for balancing the two ends of each loop.

Still a further object of my invention is to provide a radio beacon which may be converted temporarily into a regular sending station whereby an individual message may be transmitted to an aircraft pilot by means of the radio beacon without materially affecting the operation thereof and by only suspending its operation as a beacon just long enough to send such message.

Still a further object of my invention is to provide means for controlling the operation of a radio beacon from a remote point whereby the operating mechanism and the parts for the beacon may be disposed in position adjacent to the sending loops but the direction of the signal beams and the starting or stopping of the sending may be controlled from the hangar offices of an airport and the operation of the beacon may be indicated to the operator in such offices.

Still a further object of my invention is to provide a station indicator signal wherein the signal therefrom will be localized as much as possible to the air directly over the airport.

Still a further object of my invention is to provide a device for sending out a Morse "A" signal in one direction and the Morse "N" signal in a direction at an angle thereto, wherein the primary sending circuit may be operated to give a signal of a length equivalent to the combined length of the "A" and the "N" signal, and the secondary circuit may be switched to send the "A" signal in one direction and the "N" in another direction whereby the circuit breaker in the secondary circuit which changes the secondary current from the "A" to the "N" loop may draw an arc whereby the "T" signal may be substantially continuous when the pilot is upon his course and there will be no click of the pilot's receivers due to the change from the "A" to the "N" sending loops.

Still a further object of my invention is to provide means for sending an "A" signal from one sending loop and the "N" signal from another sending loop which when combined will form a continuous or "T" signal wherein the sets are provided with one cam operated breaker which closes the primary for a period of time equal to the length of the "T" signal and the secondary is normally connected into the "N" sending loop; and a second synchronized cam operated breaker is used for switching the current in the secondary to the "A" sending loop whereby the secondary breaker device may draw an arc and make a substantially continuous "T" signal and the cams and breakers need not be accurate enough to make them expensive.

Still a further object of my invention is to provide a synchronized set of cams in connection with a radio beacon, whereby certain of the cams may operate a directional beacon at inter-